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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,847	07/16/2004	Francisco Rojo Lulic	870-003-177	6392

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EXAMINER

ELKASSABGI, HEBBA

ART UNIT PAPER NUMBER

2834

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/501,847

Applicant(s)

ROJO LULIC, FRANCISCO

Examiner

Heba Elkassabgi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 07/16/04 and .
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/16/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 07/16/04, has been considered by the Examiner. The submission is in compliance with the provisions of 37 CFR 1.97.

Specification

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the abstract is over 150 words, more than one paragraph, and is not a narrative in form. Correction is required. See MPEP § 608.01(b).

Double Patenting

Applicant is advised that should claims 11 and 12 are found allowable, claim 12 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 9,13, 14,17, 18, 22, 23, 26, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh (US Patent 5562347) and further in view of Horng et al. (US Patent 6819021).

Hsieh discloses in figures 1-2 an electric motor having a stator assembly (see figure 2) and an external rotor assembly (50,52). The external rotor assembly being a rotor cup (50) coupled to a central shaft (52) having a proximal end (see figure 2) adjacent said rotor cup (50) and a distal end (see figure 2) provided with an enlargement (see figure 2). The stator assembly (see figure 2) having a bearing support tube (60) formed with an opening (see figure 2), facing the rotor cup (50), for receiving a central shaft (52) of the rotor assembly (see figure 2). A plurality of bearings (44,46) which are mounted on the shaft (52) for insertion into the bearing support tube (60), radial outer surfaces (see figure 2) of the bearings (44,46) being guided in an inner opening (see figure 2) of the bearing support tube (60). The bearings (44,46) serving to support the shaft (52), and of which a proximal bearing (44) is arranged closer to the rotor cup (50) than a distal bearing (46), the shaft (52) being axially displaceable with respect to the bearings (44,46). A retaining member (washer, 48), arranged between

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the rotor cup (50) and the proximal bearing (44), the retaining member (washer 48) serving to immobilize at least the proximal bearing (44) in its position in the bearing support tube (60) after assembly. A spring member (56), effective between the proximal bearing (44) and the rotor cup (50), that pushes the rotor cup (50) away from the proximal bearing (44) in order to push the enlargement (see figure 2) provided on the shaft (52) in the direction of the distal end of the distal bearing (46), which is inherent the spring action would occur. However, the Hsieh does not disclose a spacer. In regards to claims 13 and 14 (and 15 based on rejection of claim 11 and 16 based on rejection of claim 12), the enlargement (49,59) provided on the shaft (52) is a snap ring (c ring 59) adapted to engage against a distal end of the distal bearing (46), in order to the bearing as part of the bearing system. In regards to claims 27-28 the method of assembling the stator and rotor is inherent to the structure of the motor.

Horng et al. discloses in figures 6 and 7 an electric motor having a spacer (115) displaceable arranged in the bearing support tube (112) and defining a predetermined distance between the proximal bearing and the distal bearing (14) in order to locate the proximal and distal bearings in place. In regards to claim 18,19,22,23, and 26 (and 21 based on rejection of claim 12 and 25 based on rejection of claim 16 and 24 based on the rejection of claim 15 and 20 based on rejection of claim 11), the bearing support tube (11) is closed except for the opening facing the rotor cup (20). In regards to claim 17, a mounting flange (111,10) are formed integrally with a rotor-cup-remote end of the bearing support tube (11).

It would have been obvious to one having ordinary skill in the art to combine the base structure of Hsieh with the spacer structure of Horng et al. in order to locate the proximal and distal bearings in place.

2. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh (US Patent 5562347) as applied to claim 9, and further in view of Horng et al. (US Patent 6819021) and Stone (US Patent 4598220).

Hsieh and Horng et al. disclose the claimed invention as stated above, except for the rotor cup being engaged to the retaining member. Stone discloses in figure 1 a rotor cup (11) on a side facing toward the proximal bearing (18), with a projection (see figure 1) that is shaped for engagement against the retaining member (20) in order to catch oil from the oil reservoir.

It would have been obvious to one having ordinary skill in the art to combine the base structure of Hsieh with the spacer structure of Horng et al. in order to locate the proximal and distal bearings in place and the seating member of Stone in order to catch oil from the oil reservoir.

3. Claims 11,12,15, 16,20, 21,24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh (US Patent 5562347) as applied to claim 9, and further in view of Horng et al. (US Patent 6819021) and Kull (US Patent 6876112).

Hsieh and Horng et al. disclose the claimed invention as stated above, except for the projection of the spacer. Kull discloses in figure 1 a spacer (12) is a hollow

cylindrical element formed with a radially inwardly protruding projection (42), which abuts the shaft (14) in order for the bearing gap to be formed between the shaft and the bearing sleeve. In regards to claim 12, the spacer (12) is a hollow cylindrical element formed with a radially inwardly protruding projection (42), which abuts the shaft (14).

It would have been obvious to one having ordinary skill in the art to combine the base structure of Hsieh with the spacer structure of Horng et al. in order to locate the proximal and distal bearings in place and the projection of Kuller in order for the bearing gap to be formed between the shaft and the bearing sleeve.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heba Elkassabgi whose telephone number is 571-272-2023. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Heba Elkassabgi

United States Patent and Trademark Office
Patent Examiner AU 2834
Class 310- Electrical Generator/Motor Structure

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